



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,316	06/15/2005	Jan Van Sinderen	NI 021368	2475
65913	7550	01/06/2010	EXAMINER	
NXP, B.V. NXP INTELLECTUAL PROPERTY & LICENSING M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131			NGUYEN, DUC M	
			ART UNIT	PAPER NUMBER
			2618	
			NOTIFICATION DATE	DELIVERY MODE
			01/06/2010	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

### Office Action Summary

**Application No.**

10/539,316

**Applicant(s)**

VAN SINDEREN ET AL.

**Examiner**

DUC M. NGUYEN

**Art Unit**

2618

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 and 11-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-8 and 12-14 is/are allowed.
- 6) ☒ Claim(s) 1-5, 9, 11, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statements (PTO/SB06)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notes of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 11/16/09

### DETAILED ACTION

This action is in response to applicant's response filed on 11/16/09. Claims 1-9, 11-16 are now pending in the present application.

#### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "component" that separates audio signal from the video signal as recited in claim 16 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Response to Amendment***

2. The amendment filed 11/16/09 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

"separate audio and video information of the signal;

output an audio signal comprising the audio information on the first forward circuit path; and

output a video signal comprising the video information on the second forward circuit path".

Applicant is required to cancel the new matter in the reply to this Office Action.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim **16** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claim 16, the claim recites the limitation "separate audio and video information of the signal; output an audio signal comprising the audio information on the first forward circuit path; and output a video signal comprising the video information on the second forward circuit path", this limitation contains new subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

#### ***Claim Objections***

5. Claim 4 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 4 recites a limitation regarding a common mode correction for each amplifier circuit, this would make the gain of the second amplifier circuit **depend** on the output of the amplifier circuit that is coupled to the amplitude detector. Accordingly, this limitation removes "a gain **independent** of the amplitude detector" limitation as recited in claim 1 for the second amplifier circuit.

#### ***Claim Rejections - 35 USC 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims **9, 11** are rejected under 35 U.S.C. 103(a) as being unpatentable by **Zheng** (US Pat. Number **6,892,060**).

Regarding claim **9**, **Zheng** discloses an apparatus comprising at least one polyphase filter and a mixer-system coupled to said polyphase filter (see Fig. 1 regarding mixers 10 and filter 20 and col. 2, lin3 3), which mixer-system comprises a mixer- circuit with at least two mixers for frequency translating signals comprising an amplitude detector (see Fig. 3e regarding amplitude detectors ABS[u]) for making amplitude corrections (see Fig. 1 regarding gain mismatch estimator 40) for at least one output signal of said mixer-circuit, wherein said amplitude corrections are made during said frequency translating of said signals (see Fig. 1 regarding feedback feature of gain mismatch estimator 40).

However, **Zheng** does not disclose the receive RF signal comprises audio and video information. However, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex parte Masham* 2 USPQ2d 1647 1987).

Regarding claim **11**, the claim is rejected for the same reason as set forth in claim 9 above. In addition, **Zheng** would further teaches an oscillator LO, an amplifier circuit (compensator circuit 50) being connected between the polyphase filter 20 and the at least two mixers 10a, 10b (see Fig. 1), and the mixer-circuit and polyphase filter

being configured and arranged to suppress the video signal from at least one of said output signals (see Fig. 5, blocks 1-4, where separating image IF of a video signal would read on "suppress the video signal").

8. Claims **1, 15** are rejected under 35 U.S.C. 103(a) as being unpatentable by **Pickett et al** (US Patent Number **6,771,945**) in view of **Ichihara** (US Pat. Number **7,206,360**).

Regarding claim 1, **Pickett** teaches a mixer-system comprising:

an amplitude detector (see Fig. 1 regarding amplifier 50 and col. 4, lines 16-20), where it is clear that amplifier 50 would be used to detect the offset (or imbalance or difference) of the differential signals and would work in the similar way to the amplitude comparison circuit 21 having amplitude detectors 51, 52 as disclosed by **Ichihara** (see Fig. 4 and col. 5, lines 50-62, noting that rectifier is an amplitude detector) ;

a mixer-circuit including:

at least a first mixer and a second mixer configured to frequency translate signals comprising at least one of audio information and video information (see Fig. 1 regarding mixer 12 which would obviously teach two mixers in order to produce two differential output signals), and where the receiver would implicitly receive at least one of audio information and video information as claimed; and

a first forward circuit path coupled to an output of the first mixer, and including an amplifier-circuit having a gain control input coupled to an output of

the amplitude detector (see Fig. 1 regarding amplifier 28 and col. 2, lines 34-37, col. 4, lines 23-32); and

a second forward circuit path coupled to an output of the second mixer, including an amplifier-circuit having a gain independent of the amplitude detector (see Fig. 1 regarding amplifier 18 and col. 2, lines 23-25, which is clearly not depend on the amplitude detector) ; and

wherein the mixer system is configured to perform amplitude corrections during said frequency translating of said signals (see col. 4, lines 23-40), where the feedback signal applied to the negative input of amplifier 28 would increase or decrease amplitude of the signal in amplifier chain 15, and would “perform amplitude corrections during said frequency translating of said signals” as claimed ;

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify **Pickett** to further utilize an amplitude detector as claimed, as an alternative of obvious design choice for detecting the amplitude of a signal before processing the detected signal.

Regarding claim **15**, the claim is rejected for the same reason as set forth in claim 1 above. However, **Pickett** does not disclose the receive RF signal comprises audio and video information. However, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex parte Masham* 2 USPQ2d 1647 (1987).



9. Claims **2-5** are rejected under 35 U.S.C. 103(a) as being unpatentable by **Pickett** in view of **Ichihara** and further in view of **Zheng** (US Pat. Number **6,892,060**).

Regarding claim **2**, the claim is rejected for the same reason as set forth in claim 1 above. In addition, **Pickett** as modified in view of **Ichihara** would teach said amplitude detector comprises at least two inputs coupled to at least two outputs of said mixer-circuit and at least one output coupled to at least one control input of said mixer-circuit as claimed (see Ichihara, Fig. 4).

As to the limitation regarding a polyphase filter, **Zheng** teaches a polyphase filter coupled to at least one output of the amplifier circuit for suppressing data in at least one of the output signals of amplifier circuit (see Fig. 1 regarding complex filter 20 and col. 2, line 3 regarding polyphase filter as a complex filter). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify **Pickett** to utilize a poly-phase filter for suppressing one of signals as suggested by Zheng, for further improving the performance of the system (i.e, separating image IF signal from desired IF signal).

Regarding claim **3**, the claim is rejected for the same reason as set forth in claim 2 above. In addition, **Pickett** as modified in view of **Ichihara** would teach said amplitude detector comprises at least two level detectors each comprising an output coupled to an input of an amplifier (see Ichihara, Fig. 4 and col. 5, lines 50-62).

Regarding claim **4**, the claim is rejected for the same reason as set forth in claim 2 above. In addition, **Pickett** as modified in view of **Ichihara** would teach a further amplitude detector and a common mode correction as claimed (see Pickett, Fig. 1

regarding the common-mode correction amplifiers 42, 44 and amplitude comparison amplifier 48 and col. 3, lines 28-67).

Regarding claim 5, the claim is rejected for the same reason as set forth in claim 4 above. In addition, **Pickett** as modified in view of **Ichihara** would teach amplitude detectors (Ichihara's teaching) with input and output connections as claimed (see Pickett, Fig. 1 regarding common mode correction amplifiers 42, 44 and amplitude comparison amplifier 48 for their input/output connections).

10. Claims 9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable by **Ichihara** in view of **Zheng**.

Regarding claims 9, 11, **Ichihara** would obviously teach all the claimed limitations (see Figs. 1-2, 4 and their related disclosure) except for a polyphase filter. However, **Zheng** teaches a polyphase filter coupled to at least one output of the amplifier circuit for suppressing image IF signal in at least one of the output signals of amplifier circuit (see Fig. 1 regarding complex filter 20 and col. 2, line 3 regarding polyphase filter as a complex filter). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify **Ichihara** to utilize a polyphase filter for suppressing image IF signals as suggested by **Zheng**, for further improving the performance of the system (i.e., separating image IF signal from desired IF signal).

***Allowable Subject Matter***

11. Claims 6-8, 12-14 are allowed.

***Response to Arguments***

12. Applicant's arguments with respect to claims 1-9, 11-16 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

13. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(571) 273-8300 (for **formal** communications intended for entry)  
(571)-273-7893 (for informal or **draft** communications).

Hand-delivered responses should be brought to Customer Service Window,  
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry concerning this communication or communications from the examiner should be directed to Duc M. Nguyen whose telephone number is (571) 272-7893, Monday-Thursday (9:00 AM - 5:00 PM).

Or to Nay Maung (Supervisor) whose telephone number is (571) 272-7882.

/Duc M. Nguyen/

Primary Examiner, Art Unit 2618

Dec 30, 2009